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ABSTRACT

RELATIVE EFFECTS OF EARLY SPANISH LANGUAGE INSTRUCTION ON ENGLISH AND SPANISH LANGUAGE DEVELOPMENT OF SCHOOL CHILDREN WITH HISPANIC OR MEXICAN AMERICAN BACKGROUNDS WERE EXAMINED. THE STUDY ENDEAVORED TO ANSWER QUESTIONS RELATIVE TO SPANISH LANGUAGE LEARNING IN THE ELEMENTARY GRADES AND TO INSPIRE EDUCATORS IN GEOGRAPHICAL AREAS WITH A SPANISH-SPEAKING POPULATION TO CONSIDER THE DEVELOPMENT AND IMPLEMENTATION OF A BILINGUAL/BICULTURAL PROGRAM RELEVANT TO LOCAL POPULATION NEEDS. DATA WERE OBTAINED ON ATTITUDES TOWARD SPANISH USAGE, INSTRUCTION, AND LANGUAGE DEVELOPMENT FROM AN EXPERIMENTAL AND A CONTROL GROUP COMPOSED OF ELEMENTARY STUDENTS FROM 2 SCHOOLS. IN ADDITION, QUESTIONNAIRES WERE USED TO DETERMINE ATTITUDES OF SCHOOL PERSONNEL INVOLVED AND OF PARENTS OF CHILDREN IN THE STUDY. FINDINGS REVEALED THAT (1) STUDENTS IMPROVED IN SPANISH VOCABULARY, SPELLING, AND READING COMPREHENSION AS A RESULT OF EARLY SPANISH LANGUAGE INSTRUCTION; (2) SPANISH LANGUAGE PROGRAMS HAD NO NOTABLE EFFECT ON ENGLISH LANGUAGE DEVELOPMENT IN THE SCHOOL CURRICULUM; AND (3) PARENTS INDICATED AN INTEREST IN BECOMING INVOLVED IN THE PROGRAMS. THE DOCUMENT IS APPENDED WITH MATERIALS RELATIVE TO THE STUDY. (AN)

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THE RELATIVE EFFECTS OF EARLY SPANISH LANGUAGE INSTRUCTION ON SPANISH AND ENGLISH LINGUISTIC DEVELOPMENT

An Evaluation Report on the Pecos Language Arts Program for the Western States Small Schools Project

By: Dr. Atilano A. Valencia
Southwestern Cooperative Educational Laboratory

February 1970

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Related Programs for
Spanish Speaking People

RESEARCH AND EVALUATION STUDY PERSONNEL

Dr. Atilano A. Valencia, Director, Related Programs for Spanish Speaking People, the Southwestern Cooperative Educational Laboratory.

Responsible for the administration and coordination of the evaluation study, formulated the research design, constructed the attitudinal questionnaires and rating criteria, extended advice in interviewing techniques, provided the interpretation of statistical data, and composed the final written report.

Mrs. Ida Carrillo, Research Assistant and Field Consultant in English as a Second Language, the Southwestern Cooperative Educational Laboratory.

Assisted in many activities related to the investigation, responsible for the development of the Spanish language test, and conducted the Spanish language testing of children.

Dr. Max Luft, Director of Data Management, the Southwestern Cooperative Educational Laboratory.

Coordinated the administration of the California Test of Basic Skills among grade four and five children, selected the computer program for the analysis of the data, and extended advice in data interpretation.

Mr. Ron Hamm, Director of Public Relations, the Southwestern Cooperative Educational Laboratory.

Provided assistance in editing the written component of the final report.

Mrs. Lorraine Gutierrez, Graduate Student in Special Education, the University of New Mexico.

Provided valuable assistance in the interviewing of teachers, administrators, and auxiliary personnel, and contributed the supplementary information on this phase of the project.

Mr. Kelo Salazar, Program Analyst, Model Cities Project, Albuquerque, New Mexico.

Conducted the interviewing of parents of experimental and control group children, and contributed supplementary information on this phase of the project.

Mr. Paul Tafoya, Graduate Student in Education, the University of New Mexico.

Assisted in the interviewing of parents of experimental and control group children, and contributed supplementary data on this phase of the project.

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I. INTRODUCTION AND RELATED BACKGROUND

Background of the Project

Pecos is a small northern New Mexico village located in the Sangre de Cristo Mountains about 20 miles east of Santa Fe. Approximately 95 percent of the population in the village and outlying areas are Spanish speaking who use Spanish more than English. The community is rural with approximately 55 percent of the Spanish-speaking population classified as economically disadvantaged.

Two geographical reference points are evident in a demographical perspective--West Pecos and East Pecos. East Pecos is composed of nearly 100 percent Spanish-speaking while West Pecos is composed of 95 percent Spanish-speaking people and five percent Anglo American. Additionally, the East Pecos population income, in general, does not exceed $3,600 per year. On the other hand, the income of the West Pecos population is approximately $3,600 to $4,800 per year. The proportion of the West Pecos population whose income is below the poverty income line is notably less as compared to that found in the East Pecos population.

Although these demographic factors might be plausible intervening variables in making a comparative study between student populations in the two Pecos areas, it also is conceivable that they are not nearly as great as those in larger and more complex geographical areas where a multiplicity of educational studies have been conducted.

The Laidlaw Brothers Publishing Company books have been used in the Pecos Spanish Language Program. This is a reading series (Por El Mundo de Cuento y la Aventura) of five basic texts and a vocabulary of 1,000

words. Supplementary printed materials and visual aids have been prepared by the teacher and introduced in appropriate sequence in each of the grades (one to six). A list of some of these materials is given in Appendix D.

Program participants are given an opportunity to speak, such as in reporting new events and other phenomena. New words and concepts are introduced and developed into sentences which the children are encouraged to practice in their daily Spanish conversation. Reading is introduced through experience charts and other related activities. Basic readers, reference books, newspapers, and magazines are used. Writing also is introduced after the Spanish sounds are learned.

The Pecos Spanish Language Arts Project was originally proposed by the Western States Small Schools Project for funding under Title I. Mrs. Ellen Harnett Digneo was the Project Director between 1965 and 1968, and as the program developed, much interest and attention to the initiation of other related activities has been extended by Mrs. Tila Shaya, New Mexico WSSSP Secretary. Additionally, Henry Pascual, Bilingual Specialist in the New Mexico State Department of Education, has provided invaluable advice in the initiation and development of the project.

The primary objectives of the project are:

1. Development of reading skills which enable students to read easily material designed for native speakers of Spanish at various levels (grades one through six).

2. Development of writing skills for self-expression.

3. Acquisition of an extended oral vocabulary to complement the basic home-acquired Spanish language.

4. Development of a positive attitude toward Spanish.

5. Effecting an awareness of the fine elements in the Hispanic cultural heritage.

Research and Evaluation

The evaluation of the Pecos Spanish Language Arts Program included three major testing components: attitudinal, Spanish language achievement, and English language achievement based on the California Test of Basic Skills.

The attitudinal component consisted of student interviews based on a questionnaire designed at the Southwestern Cooperative Educational Laboratory to determine their observations and attitudes toward Spanish language usage and learning. Secondly, the attitudinal phase of the investigation included teacher and administrative interviews based on a questionnaire constructed at the Laboratory to ascertain teacher and administrative attitudes toward Spanish language instruction and the Pecos Spanish Language Program. Thirdly, the attitudinal part of the study also included parent interviews based on a questionnaire composed at the Laboratory to determine their observations and attitudes toward Spanish usage and the effects of the Spanish Language Program among their children.

A Spanish language instrument was designed to determine the Spanish language proficiency of experimental students at different grade levels. This instrument was composed by Mrs. Ida Carrillo and a Spanish language consultant to measure Spanish language proficiency in vocabulary, spelling, and reading comprehension. Samples of this instrument are provided in Appendix B. This test was administered to experimental group students in grades two, three, four, and five. Because of the literacy nature of the instrument, it was not given to students in the control school.

The California Test of Basic Skills was used to measure scholastic achievement in two general English language areas, Reading (vocabulary and comprehension) and Language and Spelling (language mechanics, language expression, and spelling). This test was administered to fourth and fifth grade students in the experimental and control schools.

The student interviews included children from grades two to five in both experimental and control schools. All of the teachers, administrators, and auxiliary personnel (librarians and counselors) from both schools were interviewed. Parents of all of the experimental and control group children were interviewed.

All of the data were tabulated by the Southwestern Cooperative Educational Laboratory. A one-way analysis of variance was performed, using a computer program format selected by Dr. Max Luft, Director of Data Management, Southwestern Cooperative Educational Laboratory. The purpose of the statistical analysis was to calculate experimental and control group means on every variable in the research design, as well as the standard deviations and F-ratios. In these terms, it was possible to observe the significant differences between the experimental and control group conditions. Additionally, it provided mean measurements that revealed the consistency of group responses based on the criterion categories given in the tests. For example, in the analysis of attitudinal items it was possible to ascertain the consistency of group responses in the favorable, indifferent, or unfavorable criterion categories.

The statistical phase of the report consists of five parts: three pertain to the attitudinal investigation, one includes the Spanish language proficiency data and findings, and the final part presents the English

language achievement data and results. All of the relevant statistical data are given in tables at the end of each section, preceded by written interpretations and inferences drawn from the statistical analysis.

Sampling Population and Testing Conditions

Since the Pecos Language Arts Program has been operating since September, 1964, a pre-test/post-test comparison was not feasible. Therefore, a post-test design involving one experimental school and one control school was conceptualized. Because all of the students in the experimental school were exposed to Spanish language instruction, control groups within the same school could not be formed. This necessitated the utilization of control groups in a Pecos elementary school where Spanish language instruction had not been offered. Within the two schools, the experimental and control groups represented the following sampling design:

Sampling Groups

Grades	Groups	Number
2	Experimental	15
	Control	12
3	Experimental	15
	Control	11
4	Experimental	14
	Control	8
5	Experimental	14
	Control	13

Grade one was omitted because the children had been exposed to only about three months of Spanish language instruction at the time of the study, and grade six was not included because of a different Spanish language teacher utilized at this grade level. In this sense, all of the experimental

groups in the study had been exposed to Spanish language instruction by the same teacher.

All of the experimental children in the study had been given Spanish language instruction since grade one, while none of the control group children had been exposed to any Spanish language instruction. All of the control group children in the study had attended the control school since grade one.

A lower enrollment was found in the control group; consequently, the "n" for both experimental and control groups at each grade level was unequal.

All of the parents of experimental and control group students were selected for interviews. This included 22 experimental group parents and 27 control group parents. Some parents had children in various grade levels; therefore, the total number of parents interviewed was not as high as the total number of children.

Nineteen teachers and related personnel were interviewed in the experimental school and five in the control school. The difference in the "n" between the two schools again is attributed to the lower student enrollment in the control school.

The Spanish language instructional time has been 25 minutes. With about five minutes consumed in non-instructional class procedures, only about 20 minutes of daily Spanish language instruction was given. Experimental school personnel envision a need for additional time to provide other Spanish language activities and to increase the effectiveness of the program. According to the experimental school principal, Tito Herrera, Spanish language instructional time was to be increased to 45 minutes, four times a week in the second semester of the 1969-70 school year.

II. STUDENT OBSERVATIONS TOWARD SPANISH LANGUAGE USAGE AND DEVELOPMENT

A student attitudinal questionnaire was constructed to determine favorable, indifferent, or unfavorable reactions toward Spanish language usage and development. These three categories were given a 3, 2, 1 numerical rating respectively. This questionnaire was composed of 14 categorical questions. Sample questions found in this form are given in Appendix A.

Fourteen tables representing 14 variables were constructed and are presented to show the "n's," the means, standard deviations, and F-ratios relative to the differences found between the four experimental and control groups in the study. The F-ratios are given in terms of significant difference at the .05 or .01 level of confidence.

The first question presented to the students was: "How much Spanish have you learned in school?" The statistical data in Table I show that the experimental group children believed they had acquired much Spanish in school. Based on a total of 6.0 possible points, the experimental group children tended to score favorably with an average of 4.7 points, while the control group children averaged between 2.3 and 3.1. This difference is indicated at the .05 level of confidence for grade one and at the .01 level of confidence for grades three, four, and five.

Question 2 (Table II) refers to student observations of interference in learning English as a result of Spanish language instruction. Two experimental groups (grades three and four) indicated that no interference was experienced while grade two tended to score between the "none" and

"some" response categories. Differences between the experimental and control groups in grades three and four were notable, with a significant difference (.05 level of confidence) given in grade three. The differences for these two grade levels are attributable to the high homogeneity in experimental group responses as compared to control group responses. Specifically, the data show that every experimental group subject in grades three and four scores in the "none" column on this variable.

Question 3 pertains to student perceptions of interference in using English in other classes as a result of learning and speaking Spanish. The data in Table III show a slight difference between all of the experimental and control group means on this variable, with the control groups showing a tendency toward the "some" category and the experimental groups scoring under the "none" column. The standard deviations show a greater variance in scoring for control group students as compared to experimental group students. Significant differences between the experimental and control groups occurred in grades four and five at the .01 and .05 levels of significance respectively.

The data in Table V show the experimental groups with a favorable reaction toward Spanish (speaking, reading, writing, spelling, and vocabulary) as compared to that of the control groups. A significant difference is revealed in grades three and four at the .05 levels of confidence. The control groups tended to score under the "indifferent" as compared to the "dislike" column. A closer relationship was found between the experimental and control group means in grades two and five; in these two instances, the control group means show a tendency toward the "favorable" column.

Varying results were noted between the experimental and control groups relative to attitudes toward speaking Spanish in school. The statistical data in Table VI show a significant difference (.01 level of confidence) in favor of the experimental group in only one area--grade four. A close relationship is found between the experimental and control groups in three other grade levels. Responses varied between "indifferent" and "favorable." The experimental group means varied between 2.3 to 2.6, while the control group means varied between 1.8 to 2.7. The total number of points in the "favorable" column are 3.0, while 2.0 points are possible in the "indifferent" category.

The students in both experimental and control groups tended to respond favorably to the question about their feeling toward speaking Spanish with parents, siblings, and grandparents. The group means in Table VII show a tendency toward the "favorable" or within the "favorable" column for all groups regarding Spanish usage with parents. In relationship to siblings, the group means appear to vary between the "indifferent" and "favorable" categories. A more favorable indication toward Spanish usage with grandparents was revealed for both experimental and control group students. Although the experimental groups tended to score slightly higher than the control groups, the statistical analysis indicated no significant difference between any of them.

Question 10 (Table X) refers to the child's attitude toward speaking Spanish with other children. It was surprising to note that the control group in grade two scored significantly higher (.05 level of confidence) as compared to the experimental group. Since this pattern does not follow among the children in the three more advanced grades, this observation may

be attributable to an unknown variable. For example, there is a possibility that because more English is spoken in the West Pecos area, the children in the beginning grades tend to score lower on this variable. Yet, the trend is reversed in grades three, four, and five with a significant difference (.05 level of confidence) occurring in favor of the grade five experimental group.

A reversal in the pattern of responses between grades also was apparent in the data given on the question, "Would you like to get Spanish language instruction in school (elementary, junior, and/or senior high)." Based on the scoring criteria, nine points reveal a "strong yes," six points an "indifferent" response, and three points a categorical "no." In Table XI it is observed that the experimental and control groups in grades two and four scored in the "yes" column. Findings show the experimental group means slightly above the control group means, with only grade three showing a significant difference (.05 level of confidence) in favor of the experimental group.

The reversal in scoring tendency occurred in grade five, with the control group scores placing consistently in the "yes" column while the experimental group scoring fluctuated between the "yes" and "indifferent" columns. Apart from the shift in the pattern of scoring in grade five, the data generally show student attitudes favorable toward Spanish language instruction through most of the grade levels. Some secondary observations on this variable are given in Appendix B.

Question 12 (Table XII) refers to the desirability of the child to learn more about the Spanish-speaking culture in the United States. All of the group means, except the third grade control group, scored in the

"yes" column. Data show the scoring slightly in favor of the experimental groups, except in grade three. Here, a notable difference in favor of the experimental group was found at the .05 level of confidence.

A very close relationship also was found among the group means relative to question 13 (Table XIII), which refers to the desirability of the child to learn more about the history of the Spanish-speaking cultures in Latin America. Again, the only difference between the experimental and control groups appeared in grade three with the experimental group mean placing in the "indifferent" column. Otherwise, the three other grades, experimental and control, tended to score within the "favorable" category.

In response to the question on the child's observation of parental feelings toward his/her studying Spanish in school (Table XIV), highly favorable indications were noted for the experimental groups in grades three, four, and five. Two of these observations were significantly different in favor of the experimental groups at the .05 and .01 levels of confidence. Whereas three of the experimental group means consistently placed within the "favorable" column, all of the control group means tended to vary between the "indifferent" and "favorable" categories. Based on the foregoing observations, it can be concluded that control group children tended to perceive parental attitudes toward this variable as "indifferent" or "favorable," while, in general, experimental group children tended to detect parental feelings toward the same variable as favorable.

Based on the foregoing data, it can be summarized that experimental group children in all grades believed that they learned much Spanish in school and perceive little or no interference in learning English as a

result of Spanish language instruction. A similar trend was noted on the question of interference in speaking English as a result of learning and using Spanish. Experimental students tended to consistently score in the "none" category while control group students appeared to place in the "some" column.

A favorable reaction was noted among all of the experimental groups toward the Spanish language in speaking, reading, writing, spelling, and vocabulary. On the other hand, control group students tended to concentrate their scoring in the "indifferent" column. Yet, the control group tendency to score in the "dislike" category did not appear.

Varying results were noted between the experimental and control group responses to the question on attitudes toward speaking Spanish in school. The experimental group responses varied between the "indifferent" and "favorable" categories while the control group answers averaged slightly lower. Neither of the two conditions, experimental or control, tended to score in the "dislike" column.

Students in both experimental and control groups responded favorably toward using Spanish with parents, siblings, and grandparents. However, as might be expected, more favorable responses were noted for parents and grandparents as compared to siblings. On the question of using Spanish with other children, the students generally tended to vary between the "indifferent" and "favorable" categories, with neither experimental or control groups showing a consistently higher trend at all grade levels in the comparative analysis.

On the question of desirability for Spanish language instruction at different grade levels, the experimental group responses generally occurred

in the "favorable" category while control group responses tended to vary between "indifference" and "favorable." In grade five, a shift in the pattern of responses occurred in favor of the control group. Here, the experimental group responses varied between "indifference" and "favorable." In general, however, it can be concluded that student attitudes tend to favor Spanish language instruction through most of their schooling.

Findings also show a student desire to learn more about the Spanish-speaking cultures in the United States, as well as history of the Spanish-speaking cultures in Latin America. This applies to both the experimental and control groups.

In terms of the statistical analysis, it is observed that, in general, experimental group students perceived a favorable parental attitude toward their children studying Spanish in school while control group students appeared to envision parental attitudes on this variable as "indifferent" or "favorable."

Based on the attitudinal items and the statistical analysis, it can be concluded that experimental group students, in general, respond favorably toward the Pecos Spanish Language Arts Program while control group students tend to respond either indifferently or favorably.

TABLE I

Student Attitudinal Analysis

Variable 1: How much Spanish have you learned in school?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	4.6 3.1	1.4 1.5	6.78*
3	Experimental Control	15 11	4.7 3.1	1.1 1.3	9.88**
4	Experimental Control	14 8	4.8 2.5	1.2 1.3	15.83**
5	Experimental Control	14 13	4.6 2.3	1.4 .7	23.85**

** Denotes significant difference at the .01 level.
* Denotes significant difference at the .05 level.

There were two parts to this question, with a total of 6 points possible.

TABLE II

Variable 2: Does learning Spanish interfere with your learning English?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	1.6 1.6	.9 .8	0.0
3	Experimental Control	15 11	1.0 1.5	.0 .8	6.73*
4	Experimental Control	14 8	1.0 1.4	.0 .7	3.69(NS)
5	Experimental Control	14 13	1.4 1.6	.6 .7	.91(NS)

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

A total of 3 points would indicate very much interference in learning English.

TABLE III

Variable 3: Does learning and speaking Spanish interfere with your using English in your other classes?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	1.4 1.5	.6 .8	.13(NS)
3	Experimental Control	15 11	1.2 1.6	.4 .8	3.24(NS)
4	Experimental Control	14 8	1.1 1.5	.3 .7	3.79(NS)
5	Experimental Control	14 13	1.1 1.7	.3 .8	4.85*

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE IV

Variable 4: Does learning and speaking Spanish interfere with your speaking English with other children?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	1.3 1.5	.6 .8	.37(NS)
3	Experimental Control	15 11	1.3 1.6	.5 .8	1.41(NS)
4	Experimental Control	14 8	1.0 1.6	.0 .7	10.26**
5	Experimental Control	14 13	1.1 1.7	.3 .8	4.85*

* Denotes significant difference at the .05 level.
** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE V

Variable 5: How do you feel about Spanish (speaking, reading, writing, spelling, and vocabulary)?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	14.2 13.2	2.5 2.7	.69(NS)
3	Experimental Control	15 11	14.3 11.7	1.6 3.6	5.69*
4	Experimental Control	14 8	14.8 11.3	.6 2.7	20.57**
5	Experimental Control	14 13	13.3 12.1	2.1 3.1	1.31(NS)

* Denotes significant difference at the .05 level.
** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 15.

TABLE VI

Variable 6: How do you feel about speaking Spanish in school?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.3 2.7	.9 .7	1.36(NS)
3	Experimental Control	15 11	2.6 2.2	.7 .8	1.74(NS)
4	Experimental Control	14 8	2.6 1.8	.5 .8	9.31**
5	Experimental Control	14 13	2.4 2.4	.9 .8	.01(NS)

** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

Total possible score = 3.0.

TABLE VII

Variable 7: How do you feel about speaking Spanish with your parents?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.7 2.4	.7 .9	.69(NS)
3	Experimental Control	15 11	2.4 2.5	.9 .8	.17(NS)
4	Experimental Control	14 8	2.9 2.8	.3 .7	.73(NS)
5	Experimental Control	14 13	2.8 2.8	.6 .5	.07(NS)

(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE VIII

Variable 8: How do you feel about speaking Spanish with your sisters and brothers?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.4 2.6	.9 .8	.30(NS)
3	Experimental Control	15 11	2.3 2.5	.9 .9	.24(NS)
4	Experimental Control	14 8	2.8 2.1	.6 1.2	2.91(NS)
5	Experimental Control	14 13	2.6 2.5	.7 .8	.11(NS)

(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE IX

Variable 9: How do you feel about speaking Spanish with your grandparents?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.8 2.6	.5 .9	.51(NS)
3	Experimental Control	15 11	2.9 2.8	.5 .6	.04(NS)
4	Experimental Control	14 8	2.9 2.3	.3 1.3	3.24(NS)
5	Experimental Control	14 13	2.8 3.0	.8 .0	.92(NS)

(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE X

Variable 10: How do you feel about speaking Spanish with other children?

Grade	Sampling	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.3 3.1	.9 .5	7.71*
3	Experimental Control	15 11	2.3 2.5	.9 .9	.10(NS)
4	Experimental Control	14 8	2.6 2.0	.7 1.0	2.76(NS)
5	Experimental Control	14 13	2.4 2.5	.9 .8	.08(NS)

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE XI

Variable 11: Would you like to get Spanish language instruction in your school (elementary, junior high school, high school)?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	7.9 7.5	2.0 2.3	.24(NS)
3	Experimental Control	15 11	8.7 6.5	.7 2.8	7.78*
4	Experimental Control	14 8	8.1 7.0	1.4 2.2	1.74(NS)
5	Experimental Control	14 13	6.8 8.7	2.3 1.1	7.03*

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 9 (would indicate all levels).

TABLE XII

Variable 12: Would you like to learn more about the history of the Spanish speaking culture in the United States?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.9 2.8	.5 .5	.02(NS)
3	Experimental Control	15 11	2.9 2.2	.3 .9	6.28*
4	Experimental Control	14 8	3.0 2.6	.0 .7	3.69(NS)
5	Experimental Control	14 13	2.9 2.8	.5 .5	.00(NS)

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE XIII

Variable 13: Would you like to learn more about the history of the Spanish speaking culture in Latin America?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.7 3.0	.7 .0	1.70
3	Experimental Control	15 11	2.9 2.2	.2 .9	8.13**
4	Experimental Control	14 8	2.9 2.4	.5 .9	2.46(NS)
5	Experimental Control	14 13	2.7 2.8	.7 .5	.27(NS)

** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

TABLE XIV

Variable 19: How do your parents feel about your studying Spanish in school?

Grade	Sampling Groups	n	Mean	Standard Deviation	F
2	Experimental Control	15 12	2.5 2.8	.8 .5	1.11(NS)
3	Experimental Control	15 11	3.0 2.5	.0 .8	4.67*
4	Experimental Control	14 8	2.9 2.3	.3 .7	10.58**
5	Experimental Control	14 13	2.7 2.3	.6 .7	2.39(NS)

* Denotes significant difference at the .05 level.
** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

Total possible points = 3.

III. TEACHER AND ADMINISTRATIVE ATTITUDES TOWARD SPANISH LANGUAGE INSTRUCTION AND ITS EFFECTS

A questionnaire was constructed for interviews conducted among the faculties, administrators, and auxiliary personnel in the West Pecos Elementary School and the East Pecos Elementary School. All of the interviews were administered by one interviewer from the Southwestern Cooperative Educational Laboratory.

The questionnaire consisted of 10 major variables with questions under each variable. Individual responses under each variable were totaled to represent one of the measuring components. Sample questions found in the questionnaire are given in Appendix A.

The first question was to determine perceptions on the transfer effects of early Spanish language instruction to achievement in the English language. Sub-categories included transfer effects in oral communication, grammar, reading, composition or writing, and spelling. A one-way analysis of variance was undertaken, using computer programming, to determine the significant difference between the experimental and control groups on this and other major variables.

The data in Table XV show that the experimental group perceived a positive transfer effect in English language development among students who are given Spanish language instruction, while the control group envisioned the transfer effect to be "minimal." The analysis shows a significant difference (.01 level of confidence) between the two groups.

The second question was to ascertain teacher and administrative observations relative to interference effects of early Spanish language

instruction to development in English. The categories in this question included interference effects in oral communication, grammar, reading, composition or writing, and spelling. The means for the experimental and control groups were 5.8 and 8.8 respectively, for a significant difference at the .01 level of confidence. With a total of 15 points, the control group measured 8.8--only slightly above the 50 percent level (7.5), while the experimental control group scored below the 50 percent level in Table XV. It is noted that the experimental group envisioned an absence of interference while the control group perceived some or minimal interference in English communication development for children who are exposed to Spanish language instruction.

Variable 3 refers to teacher and administrator observations of children attitudes toward the Spanish-speaking culture. In a favorable perspective, a total of nine points are possible, while six points represent an indifferent attitude. The analysis showed a very close relationship between the experimental and control groups on this variable, for an insignificant difference at the .05 level of confidence.

Question 4 pertains to teacher and administrator observations on student overt behavior in the overall learning scene. Sub-categories include participating in asking questions, relevancy of questions asked by children, involvement of children in searching and presenting solutions to problem solving situations, and oral interaction between children and between children and teachers. Table XV gives a mere one point difference (14.4 to 13.4) between the experimental and control groups on this variable for an insignificant difference at the .05 level

of confidence. However, based on the total number of points possible on the favorable column (18), both groups showed a positive indication about overt student behavior in the total learning environment.

Questions 6, 7, and 8 were presented only to the Spanish language teachers and school personnel directly involved in instruction and coordination relative to the Spanish language program. Question 6 referred to the availability of Spanish language texts at different grade levels (elementary, junior high, and senior high), question 7 pertained to the availability of Spanish language supplementary materials and audiovisual aids, and question 8 referred to the relevancy of the present Spanish Language Arts content to the needs and culture of the target population.

Relative to questions 6, 7, and 8, 15 points indicate availability and compatibility, 10 points represent average availability and relevance, and five points reveal absence or incompatibility. Both groups, control and experimental, noted a shortage of Spanish language texts and supplementary materials, particularly at the elementary level. Moreover, they thought the present materials to be low in relevance to the culture of the Pecos children.

Question 9 was designed to ascertain teacher and administrator perceptions on the effects of in-service training in enlisting support for the Spanish Language Arts program. Four sub-questions were given to measure observations of in-service training effects on the teachers in the program, teachers not in the program, auxiliary personnel (counselors, librarians, etc.), and administrators. Table XV shows

the experimental group with a "favorable" indication and the control group with a "minimal" response pattern. The difference between the two groups was measured at the .01 level of confidence.

Question 10 was to determine the extent of involvement by school personnel in developing the Spanish Language Arts program. Sub-questions included involvement of teachers in the program, teachers not in the program, auxiliary personnel, and administrative staff. The experimental group scored significantly favorably while the control group tended to respond consistently in the "minimal" column. The difference between the two groups was calculated at the .01 level of confidence.

Statistical findings revealed a favorable attitude toward the Spanish language program among personnel in the experimental school while the attitudes of personnel in the control school tended to place in the "minimal" category. Yet, neither group appeared to express a highly negative attitude toward the program.

TABLE XV

School Personnel Attitudes

Variable	Sampling Groups	n	Mean	Standard Deviation	F
1	Experimental Control	19 5	12.4 8.8	2.4 2.3	8.55**
2	Experimental Control	19 5	5.8 8.8	1.3 3.4	8.77**
3	Experimental Control	19 5	6.0 5.0	1.5 1.3	1.81(NS)
4	Experimental Control	19 5	14.4 13.4	3.3 2.8	.33(NS)
5	Experimental Control	19 5	13.2 13.2	4.6 2.2	.00(NS)
6	Experimental Control	19 5	1.6 3.0	3.9 6.0	.34(NS)
7	Experimental Control	19 5	1.3 .0	3.1 .0	.74(NS)
8	Experimental Control	19 5	1.8 .0	4.4 .0	.81(NS)
9	Experimental Control	19 5	11.6 7.0	1.3 2.5	29.15**
10	Experimental Control	19 5	10.8 8.4	1.6 1.2	8.99**

** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

IV. PARENTAL ATTITUDES TOWARDS SPANISH USAGE AND SPANISH LANGUAGE DEVELOPMENT

Interviews were conducted with 22 parents of students in the Spanish language program and 27 parents of students in the control group. Twenty questions were presented to determine parental observations and attitudes about the effects of early Spanish language instruction on their children.

The first four questions referred to an observable improvement in the child's ability to communicate in Spanish with parents, grandparents, siblings, and other children. There were two parts to each question: (1) the child's observable improvement in Spanish vocabulary and (2) the child's observable improvement in Spanish usage without mixture of English words. Although experimental group parents tended to score slightly higher (more favorable) than control group parents, a significant difference occurred only on the question relative to improvement in Spanish communication with grandparents. This observational difference was measured at the .05 level of confidence.

In terms of points on questions 1, 2, 3, and 4, the control group parents tended to indicate some improvement in Spanish language development which might be considered a normal phenomenon in a Spanish-speaking family. The experimental group parent responses measured only slightly higher, but not sufficiently to indicate a dramatic improvement in English usage with relatives and other children.

Question 5 referred to observable changes in the child's ability to communicate in English. Both groups, experimental and control,

scored within the "favorable" column on this variable. The analysis revealed an insignificant difference between the two groups.

A close relationship in responses was observed between the two groups, experimental and control, on questions 6, 7, and 8. Question 6 referred to the child's tendency to use Spanish with Spanish-speaking children, question 7 pertained to the child's tendency to use English with Spanish-speaking children, and question 8 referred to the child's propensity to associate with Spanish-speaking children. Both groups responded consistently to the "some" column as compared to the "high" or "no change" criterion categories. The two groups revealed similar mean scores on question 8; however, here they scored on the "high" column as compared to the other two criterion categories.

Question 9 pertained to the child's tendency to associate with English-speaking or Anglo children. The data show an insignificant difference between the responses of the experimental and control groups. The group means measured 2.3 and 1.9 for the experimental and control groups respectively, which approximates the total number of points possible under the heading "some." Three points would be indicative of much association. However, it is conceivable that this statistical finding is related to the circumstances of this geographic area rather than the experimental and control conditions in the study. The enrollment of Anglo children in the Pecos schools is about 5.0 percent. This is an important factor to consider in studying the findings.

Questions 10 and 11 covered the child's observable attitude about learning and using Spanish in some classes, and the parent's attitude

toward the child learning and using Spanish in some classes. Again, both the experimental and control groups indicated a close relationship in responses to the two questions. Both groups indicated a highly favorable attitude toward the idea of their children learning and using Spanish in some classes, which is indicative of parental support for Spanish language instruction. The mean group responses were 3.0 and 2.8 (experimental and control) and 3.0 and 3.0 (experimental and control) out of a possible 3.0 favorable points.

Question 12 and its sub-categories (variables 12, 13, 14, 15, and 16) included parental attitudes toward Spanish language instruction at various grade levels. However, because of difficulties in rating and scoring these responses, a sufficiently valid analysis of these responses was not possible, and statistical data on these variables have been excluded from the interpretation process.

Question 13 (variable 17) pertained to parental attitude toward continuous Spanish language instruction at subsequent levels once it has been introduced in the curriculum. Experimental and control groups scored within the "yes" column, with 2.7 and 2.6 points respectively out of a 3.0 possible points. The analysis showed an insignificant difference between the two groups.

Questions 14 and 15 (variables 18 and 19) referred to parental attitudes toward the inclusion of Hispanic or Mexican American cultural features in the subject matter for all of the children in the Pecos schools. The mean responses to both questions were almost identical for both parental groups, with 3.0 and 2.9 average responses for

question 14 and 3.0 and 2.8 mean responses for question 15. Since 3.0 points indicated the total mean points possible under the "yes" criterion column, the data showed a highly positive indication toward the inclusion of Hispanic or Mexican American cultural elements in the subject matter.

Question 16 (variable 20) attempted to elicit an indication of the extent of parental involvement in community-school activities regarding the Spanish Language Arts program. Responses varied between the "none" and "some" criterion categories. Three points indicate "much" participation, two points represent "some" participation, and one point reveals "no" involvement. The data showed the experimental and control group means at 1.5 and 1.1 respectively, for an insignificant difference at the .05 level of confidence.

Yet, in terms of question 17 (variable 21), the experimental group responses indicated an above average interest in becoming involved in school-community activities concerning the Spanish language program. The Data showed the control group mean on this variable at 2.0 (within the "some" criterion column) while the experimental group mean measured 2.5 (within the "much" criterion category). The difference between these two readings is indicated as significant at the .05 level of confidence. Since the Spanish language program is relative to the children of the experimental group parents, this difference is conceivable.

The statistical data based on parental responses showed a number of noteworthy observations. The analysis revealed that parents of

experimental and control students did not envision a significant improvement in Spanish vocabulary and usage among relatives, siblings, and other children. It appeared that Spanish language development is perceived as that which is normally expected in the home environment. If children have acquired a more extensive Spanish vocabulary, grammatical structure, and other linguistic features, the parents had not observed any significant changes in their communication (other than normally expected) with others in the home and community. This need not suggest that experimental students have not improved in knowledge and potential usage of Spanish, but the data showed that children may revert to vernacular or colloquial expressions or verbal patterns in their communication with relatives and other children in the home and community.

The findings showed that parents in both groups had observed notable improvements in their children's ability to communicate in English. Since no significant difference appeared between the two group means, it can be concluded that Spanish language instruction does not positively or negatively affect the experimental children's ability to communicate in English with their relatives or other children at home and in the community.

The analysis also showed a positive parental attitude, experimental and control, for the children learning and using Spanish in some classes. This is indicative of community support for the Spanish language program. This finding is supported by the positive parental responses of both groups to the notion of continued Spanish language instruction at subsequent grade levels following its introduction in the school curriculum.

The question relative to the inclusion of Hispanic or Mexican American cultural elements in the subject matter for all of the Pecos children produced a highly favorable reaction from both experimental and control group parents.

According to the data, the parents (experimental and control) indicate little or no involvement in school-community activities relative to the Spanish language program. However, a better than average interest in becoming involved in these types of activities was indicated, especially by parents of experimental group children.

TABLE XVI

Parental Attitudes
(Variables 1-10)

Variable	Sampling Groups	n	Mean	Standard Deviation	F
1	Experimental Control	22 27	3.9 3.3	1.3 1.2	2.20(NS)
2	Experimental Control	22 27	4.4 3.4	1.3 1.2	7.45**
3	Experimental Control	22 27	3.5 3.0	1.6 1.3	1.46(NS)
4	Experimental Control	22 27	3.4 3.1	1.0 1.2	.98(NS)
5	Experimental Control	22 27	4.3 4.6	1.5 1.3	.47(NS)
6	Experimental Control	22 27	1.9 2.0	.7 .6	.28(NS)
7	Experimental Control	22 27	2.2 2.0	.6 .7	1.34(NS)
8	Experimental Control	22 27	2.9 2.9	.3 2.9	.03(NS)
9	Experimental Control	22 27	2.3 1.9	.8 .9	2.15(NS)
10	Experimental Control	22 27	3.0 2.8	.2 .7	1.30(NS)

** Denotes significant difference at the .01 level.
(NS) Denotes no significant difference at the .05 level.

TABLE XVI
(Continued)

Parental Attitudes
(Variables 11-21)

Variable	Sampling Groups	n	Mean	Standard Deviation	F
11	Experimental Control	22 27	3.0 3.0	.0 .4	.81(NS)
12	Experimental Control	22 27	2.4 1.3	1.1 1.0	12.84(NI)
13	Experimental Control	22 27	.7 1.2	1.3 1.2	2.26(NI)
14	Experimental Control	22 27	.3 .9	.9 1.2	4.03(NI)
15	Experimental Control	22 27	.0 .5	.0 1.1	4.29(NI)
16	Experimental Control	22 27	.0 .7	.0 1.2	6.77(NI)
17	Experimental Control	22 27	2.7 2.6	.7 .8	.18(NS)
18	Experimental Control	22 27	3.0 2.9	.0 .3	2.63(NS)
19	Experimental Control	22 27	3.0 2.8	.0 .6	3.24(NS)
20	Experimental Control	22 27	1.5 1.1	.8 .4	3.13(NS)
21	Experimental Control	22 27	2.5 2.0	.6 .7	6.74*

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.
(NI) Not included in the data interpretation.

V. SPANISH LANGUAGE ACHIEVEMENT

A Spanish language test for grades two, three, four, and five was constructed by Mrs. Ida Carrillo of the Southwestern Cooperative Educational Laboratory with assistance from a Spanish language consultant. Since the Laidlaw Brothers Spanish Language Series is serving as the basic content for instruction in the Pecos Language Arts program, it was the principal reference in developing the test. The Spanish language consultant provided assistance in suggesting correct language usage and compositional elements in the test construction.

Because of the recency of the instrument and the time factor of approximately six months in this evaluation study, a pilot study to establish the validity and reliability of the instrument at each grade level was not feasible. Therefore, the test scores are determined in relationship to the number of points possible under each test category. A total of 10 points were given for spelling, 20 for vocabulary, and 10 for comprehension. Consequently, a total of 40 points were possible in the entire test.

According to the results, three experimental groups scored approximately 50 percent on the spelling items; only grade five scored below the 50 percent level. A similar relationship was apparent in vocabulary achievement. However, grade four scored significantly lower (.05 level of confidence) than the three other groups. All of the groups scored below the 50 percent level in comprehension, with grades two and four scoring significantly lower (.05 level of confidence) than the two other experimental classes. Yet, in terms of the

total language scores, the statistical data revealed no significant difference (.05 level of confidence) between the four experimental classes.

A percentage reference was used in the interpretation only to indicate Spanish language achievement in relation to the total score possible in each test category. However, this should not be interpreted as a valid criterion in terms of high, average, or low achievement. The data in this analysis, based on the instrument used in the study, simply reveals that Spanish language achievement had occurred in spelling, vocabulary, and reading comprehension. The statistical data showed a tendency toward lower achievement in reading comprehension as compared to spelling and vocabulary. Based on this observation, further study or instructional emphasis on this variable is suggested.

The significant difference between the experimental groups in vocabulary and reading comprehension might be attributed to a test variance in degree of difficulty rather than achievement. Until complete validity data on all of the test components are available, it should not be concluded that achievement differences in vocabulary and reading comprehension clearly exist.

A control group versus an experimental group arrangement was not used in this part of the evaluation because of the literacy element in the Spanish language test. Since the test design is based primarily on literacy rather than oral achievement, it is conceivable that performance of control group students who have not been exposed to reading, vocabulary drills, and spelling in Spanish would score near or at the

zero level. Moreover, the omission of the control group in this situation avoided the possibility of a traumatic test experience for students whose Spanish literacy level is below that of the written matter. Yet, since it can be assumed that non-literate students in Spanish would score near or at the zero level on the Spanish language test, there would, undoubtedly, be a significant difference (.05 or .01 level of confidence) between all of the experimental groups and the control groups.

A Spanish oral language component was not included in this instrument. This is another linguistic factor that can provide additional information on Spanish language development and is, therefore, recommended for future consideration. This inclusion would necessitate individual testing. The present instrument can be given on a group basis, which facilitates the administration of the test.

Based on the test results and the statistical analysis, it can be concluded that students in the Pecos Language Arts program have improved in the areas of Spanish vocabulary, spelling, and reading comprehension. The data tend to reveal greater achievement in vocabulary and spelling as compared to reading comprehension. Since this was a consistent indication across all grade levels in the study, it is suggested that this language area be given special consideration and emphasis in the program.

TABLE XVII

Spanish Language Achievement

Based on a SWCEL Spanish Language Test

Variables	Grade Level	n	Mean	Standard Deviation	F
I Spelling (10)	2	14	5.0	2.2	2.42(NS)
	3	15	5.5	1.4	
	4	12	5.2	1.6	
	5	13	3.5	2.7	
II Vocabulary (20)	2	14	10.1	2.6	4.05*
	3	15	9.3	3.0	
	4	12	6.5	4.2	
	5	13	10.8	3.0	
III Comprehension Reading (10)	2	14	2.4	1.7	4.93*
	3	15	3.7	1.8	
	4	12	2.1	1.3	
	5	13	4.3	1.9	
Total Score (40)	2	14	17.5	4.0	2.33(NS)
	3	15	18.5	3.4	
	4	12	13.8	5.6	
	5	13	18.6	6.8	

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

VI. SCHOLASTIC ACHIEVEMENT BASED ON THE CALIFORNIA TEST OF BASIC SKILLS

The California Test of Basic Skills was administered to grades four and five at the West Pecos Elementary School (experimental groups) and at the East Pecos Elementary School (control groups). Twenty-three subjects were included in the grade four experimental group and thirteen in the control condition, while twenty-three students were given the test in the grade five experimental group and eleven in the control group. This sampling represents all of the students in grade levels four and five who have been exposed to Spanish language instruction since grade one, and all of the students in grades four and five who have been attending the control group school since grade one.

The CTBS was administered and scored by personnel from the Southwestern Cooperative Educational Laboratory. Because of the absence of pretest data as early as grade one, the statistical information in this part of the study is given in terms of a post-test analysis. Since a pretest versus post-test analysis was impossible, it would have to be assumed that both groups were equivalent or nearly equivalent in grade one. Other factors such as similarity in geography (rural), general income, cultural background (Spanish speaking), and school curriculum (other than the Spanish language program) lend support to this assumption.

The main purpose of this phase of the analysis was to ascertain the effects of Spanish language instruction on scholastic achievement in the English language arts. A post-test measurement on achievement

in reading vocabulary, reading comprehension, language mechanics, language expression, and spelling (all in English) provided data for a comparative analysis between two experimental groups and two control groups. A one-way analysis of variance was performed to determine the significant difference between the experimental and control groups at the .05 level of confidence.

The statistical data in Tables XVIII and XIX are arranged into two major skill blocks--reading, and language and spelling. The vertical columns show the mean raw scores and grade equivalents for both experimental and control groups, coupled with standard deviations and F ratios. Note that the grade equivalent factor has been multiplied by 10; therefore, this can easily be converted into meaningful reading by dividing the given factor by 10.

The data reveal a very close relationship between the experimental and control group means in all of the basic skill components given in the test, except in language expression where a difference occurs at the .05 level of confidence. In this category, the experimental group measures about one grade level above the control group. Additionally, the findings show a greater variance in scores among experimental group students as compared to control group students in this area. However, this relationship does not hold true for the experimental and control groups in grade five. Here a very close relationship between the groups is maintained in all of the basic skills, including language expression. Because the difference noted in grade four on language expression was not evident between the experimental and

control groups in grade five, it cannot be clearly concluded that higher achievement on this variable is attributed to the experimental condition. It is conceivable that an intervening variable, peculiar to the grade four experimental group, accounts for the difference noted on language expression between the control and experimental groups in this grade level. Additional observations might be undertaken to determine the nature of the intervening variable.

A secondary observation of the data reveals that fourth and fifth grade students in the Pecos schools (experimental and control) are measuring below grade level in English skills, based on the English language components and norms given in the CTBS. Since many of the Pecos children enter the first grade level with little or no knowledge in English, this finding is comprehensible. However, it does suggest that this area be given curricular emphasis. Therefore, an innovative English oral language program at this level, or preferably at the kindergarten level, is highly recommended. Special emphasis in different aspects of the English language arts also might be required at different grade levels.

Based on the overall statistical analysis in this part of the study, it can be generally concluded that a very close relationship in English reading and language achievement exists between the experimental and control groups. According to the statistical data, it cannot be concluded that the Spanish language program has had a notable effect, negative or positive, in English language development in the school curriculum.

TABLE XVIII

Scholastic Achievement

Based on the California Test of Basic Skills
Grade Level 4

SUBJECT	Variable	Sampling Groups	n	Mean	Standard Deviation	F
READING	VOCABULARY (raw)	Experimental	23	14.5	6.0	1.06(NS)
		Control	11	12.0	7.3	
	(grade equiv.)	Experimental	23	32.7	9.7	.68(NS)
		Control	11	29.3	13.1	
	COMPREHENSION (raw)	Experimental	23	16.0	5.2	1.96(NS)
		Control	11	13.4	4.8	
	(grade equiv.)	Experimental	23	32.8	8.4	2.03(NS)
		Control	11	28.4	7.8	
	READ. TOTAL (raw)	Experimental	23	30.1	9.8	1.55(NS)
		Control	11	25.4	10.9	
	(grade equiv.)	Experimental	23	33.3	8.7	1.29(NS)
		Control	11	29.5	9.1	
LANGUAGE AND SPELLING	LANG. MECH. (raw)	Experimental	23	9.3	4.6	1.09(NS)
		Control	11	7.7	2.8	
	(grade equiv.)	Experimental	23	37.8	13.1	1.23(NS)
		Control	11	33.0	7.6	
	LANG. EXPRESS. (raw)	Experimental	23	11.0	4.1	7.04*
		Control	11	7.5	2.0	
	(grade equiv.)	Experimental	23	33.1	11.7	6.30*
		Control	11	23.5	5.1	
	SPELLING (raw)	Experimental	23	12.0	5.7	.66(NS)
		Control	11	10.4	4.0	
	(grade equiv.)	Experimental	23	35.0	11.4	3.51(NS)
		Control	11	27.6	8.1	
	LANG. TOTAL (raw)	Experimental	23	32.5	13.1	2.70(NS)
		Control	11	25.5	5.5	
	(grade equiv.)	Experimental	23	35.0	11.1	2.55(NS)
		Control	11	29.0	4.4	

* Denotes significant difference at the .05 level.
(NS) Denotes no significant difference at the .05 level.

TABLE XIX

Scholastic Achievement

Based on the California Test of Basic Skills
Grade Level 4

SUBJECT	Variable	Sampling Groups	n	Mean	Standard Deviation	F
READING	VOCABULARY (raw)	Experimental	21	15.4	7.4	.17(NS)
		Control	13	16.5	7.9	
	(grade equiv.)	Experimental	21	35.0	12.8	.09(NS)
		Control	13	36.5	13.3	
	COMPREHENSION (raw)	Experimental	21	16.6	8.0	.04(NS)
		Control	13	17.2	7.2	
	(grade equiv.)	Experimental	21	34.4	13.7	.04(NS)
		Control	13	35.4	11.6	
	READ. TOTAL (raw)	Experimental	21	32.0	14.6	.11(NS)
		Control	13	33.8	14.1	
	(grade equiv.)	Experimental	21	34.2	13.3	.04(NS)
		Control	13	35.2	12.2	
LANGUAGE AND SPELLING	LANG. MECH. (raw)	Experimental	21	11.3	5.1	.64(NS)
		Control	13	9.9	5.1	
	(grade equiv.)	Experimental	21	40.4	15.0	.04(NS)
		Control	13	39.3	15.0	
	LANG. EXPRESS. (raw)	Experimental	21	11.9	4.7	.04(NS)
		Control	13	11.8	5.0	
	(grade equiv.)	Experimental	21	36.1	15.8	.01(NS)
		Control	13	35.4	13.0	
	SPELLING (raw)	Experimental	21	12.9	5.6	.07(NS)
		Control	13	13.5	6.1	
	(grade equiv.)	Experimental	21	36.0	11.3	.11(NS)
		Control	13	37.5	12.8	
	LANG. TOTAL (raw)	Experimental	21	36.2	14.7	.03(NS)
		Control	13	35.2	14.5	
	(grade equiv.)	Experimental	21	38.4	13.3	.14(NS)
		Control	13	36.6	12.8	

(NS) Denotes no significant difference at the .05 level.

VII. CONCLUSIONS AND RECOMMENDATIONS

This study focused on the relative effects of early Spanish language instruction on the English and Spanish language development of elementary school children with an Hispanic or Mexican American background.

The notion of notable interference in learning and using English because of Spanish language instruction in the elementary grades has been negated by interview responses of experimental group children, experimental group teachers and other school personnel, and experimental group parents. These findings were further substantiated through results obtained from scores given through the California Test of Basic Skills. Data relative to these results indicated an insignificant difference between two experimental and control groups in English reading and language development.

In general, both experimental and control group children indicated a desire for Spanish language instruction through their education in the Pecos schools. This finding was equally supported by parental responses for both the experimental and control groups. Similarly, experimental school personnel expressed a favorable attitude toward the Spanish language program while control school personnel responded indifferently to the same question.

Experimental school personnel envision a positive transfer effect in English language development as a result of Spanish language instruction while control group personnel perceive this type of transfer effect to be minimal. In general, data from the California Test of

Basic Skills showed a very close relationship in English reading and language development between experimental and control groups which suggests an absence of a positive transfer effect in English development for students who have been exposed to Spanish language instruction.

The children's attitudes toward using English in school varied from indifferent to favorable with a close relationship indicated for both experimental and control group children. Both groups indicated a greater usage of Spanish with parents and grandparents as compared to siblings and other children. It appeared that a mixture of Spanish and English, or only English was used most frequently with peers.

Parental observations revealed that some improvement in Spanish usage was observed among experimental group children at home. However, no dramatic effect was significantly indicated. It is conceivable that children might revert to vernacular usage at home. For this reason, Spanish language improvement cannot be truly indicated from this observation.

Experimental group children interview responses showed that much Spanish has been learned at school. The results of the Spanish language test administered among experimental group children showed that Spanish language achievement occurred in vocabulary, spelling, and reading comprehension. Although the results cannot be given a comparative quantitative value until test validity data are available, the test findings, nevertheless, revealed that experimental group children are gaining in the Spanish language arts.

The Spanish language test results also revealed differences between the three language components, with a lower mean given in

reading comprehension. This language component is suggested for futher consideration and emphasis in the Spanish language program.

Both experimental and control group children responded favorably to the notion of Spanish language instruction through their schooling in Pecos. Similar responses were observed among experimental and control group parents.

Children and parents, experimental and control, expressed a highly favorable attitude toward inclusion of learning materials relative to the culture of the Spanish-speaking people. Based on this finding, the selection or development of learning materials depicting the culture of the Southwestern Spanish-speaking people for use in the curriculum is highly recommended.

Experimental school personnel involved in the Spanish language program indicated a shortage of Spanish language texts and supplementary materials, especially at the elementary level. This observation also applies to the cultural relevancy of the learning materials in the Spanish language arts.

The data revealed that parents had not experienced much involvement in school-community activities related to the Spanish language program. However, the findings indicated an interest in becoming involved. This is particularly apparent among parents whose children are in the Spanish language program.

The data indicated that experimental school personnel had participated in the development of the Spanish language program; however, as might be expected, control school personnel reveal minimal involvement in this respect.

In terms of the statistical findings, it can be generally concluded that a favorable attitude toward Spanish language instruction exists among the Pecos children, parents, and teachers; especially among personnel in the experimental school. It also can be concluded that children have experienced an improvement in Spanish language development which may not be immediately apparent to Spanish-speaking parents. However, Spanish reading comprehension needs to be given particular emphasis in the program.

Continued development of Spanish language materials, with special consideration to the culture of Southwestern Spanish-speaking children, must be brought to the attention of writers and publishers. Spanish-speaking children and parents appeared to have a favorable attitude toward the Spanish-speaking culture and the language, and have expressed a desire for inclusion of materials related to their culture and language.

It was observed by experimental school personnel that 25 minutes of daily Spanish language instruction is insufficient for expansion or inclusion of related language activities. It is, therefore, recommended that additional time be provided in this curricular area.

Continuation of the Pecos Spanish Language program is highly recommended, with consideration for its introduction and development in all Pecos schools. Continued in-service training of personnel involved in the program is suggested with special consideration for the inclusion of personnel from other schools. Bilingual teacher aides can be useful, especially in related language activities where high

professional competencies are not required. They, too, should participate in preservice and in-service training institutes. Outside training consultants or agencies can offer much in familiarizing teachers with multi-instructional media and instructional protocols that can enhance learning not only in the Spanish language arts but in other curricular areas as well. Administrative consideration for the utilization of these services is suggested.

A secondary observation of the data revealed that fourth and fifth grade students in the Pecos schools (experimental and control) measure below their grade level in English skills, based on the English language components and norms given in CTBS. Since many of the Pecos children enter the first grade with little or no knowledge of English, this finding is comprehensible. However, it does suggest that this area needs curricular emphasis. Therefore, an innovative English oral language program at this level, or preferably at the kindergarten level, is highly recommended. Special emphasis in different aspects of the English language arts also might be required at different grade levels.

Finally, it is hoped that this report is used as one of the components of the project's dissemination plan. The Pecos Spanish Language Arts program can serve as a prototype for geographical areas with a similar demographic base. It is further hoped that the description of the program and the findings given in this study have answered various questions relative to Spanish language learning in the elementary grades, and will inspire educators in geographical areas with a Spanish-speaking population to seriously consider the development and implementation

of a bilingual/bicultural program which is relevant to the local population needs.

Appendix A: Samples of Attitudinal Questionnaires

Student Attitudinal Questionnaire
(Sample Questions)

		Very Little	Some	Very Much
1.0	How much Spanish have you learned in school:			
	1.1 In vocabulary	____	____	____
	1.2 In correct usage (speaking)	____	____	____

		None	Some	Very Much
2.0	Does learning Spanish interfere with your learning English?	____	____	____
3.0	Does learning and speaking Spanish interfere with your using English in your other classes?	____	____	____
4.0	Does learning and speaking Spanish interfere with your speaking English with other children?	____	____	____

Teacher and Administrative Attitudinal Questionnaire
(Sample Questions)

		Low	Average	High
1.0	Spanish oral communication on the school grounds appears to be:	____	____	____
2.0	Favorable comments about the Spanish-speaking culture appear to be:	____	____	____
3.0	Participation by children in asking questions appears to be:	____	____	____

		Poor	Average	Excellent
4.0	How would you classify the relevancy of present Spanish language arts content to the needs and culture of the target population at grade level 1-2:	____	____	____

Parents' Attitudinal Questionnaire
(Sample Questions)

	No Change	Some	High
1.0 Have you noticed an improvement in your child's ability to communicate with you in Spanish, such as in:			
1.1 Spanish usage without mixture of English words	___	___	___
2.0 Have you noticed a change in your child's ability to communicate in English, such as:			
2.1 Fluency in speaking	___	___	___

	No	Indifferent	Yes
3.0 Do you believe some of the features of the Hispanic or Mexican American culture should be included in the school's subject-matter content for Spanish-speaking children?	___	___	___

Appendix B: Sample of Spanish Language Test

PRUEBA DEL QUINTO GRADO

Nombre _____ Escuela PECOS

Fecha _____ Examinadora _____

Nota total _____

* * * * * * * * * * * * * * * * * * * *

Este examen consta de cuarenta preguntas. Contéstelas lo más rápido que sea posible. Si no sabe la respuesta a una pregunta, no se detenga; continúe con la pregunta siguiente.

* * * * * * * * * * * * * * * * * * * *

PARTE I -- DELETREO

Escriba la letra que falta en cada una de las palabras siguientes.

1. cu___pleanos
2. e___tranos
3. relo___
4. bi___cocho
5. vari___s
6. a___anico
7. ve___inos
8. sa___roso
9. pre___io
10. ce___tavos

PARTE II -- VOCABULARIO

Selecciónе el número 1, 2, 3, o 4 para indicar cual de las cuatro respuestas mejor llena el espacio en blanco.

1. Vi ese automovil ayer pero el _____ no me gustó.
   1. libro
   2. cuadro
   3. número
   4. precio
2. Yo hojeé el _____ anoche.
   1. coche
   2. aparador
   3. libro
   4. museo
3. Anoche había cinco automoviles _____ frente a la escuela.
   1. bajados
   2. cerrados
   3. estacionados
   4. sentados
4. Un _____ anda con cuidado para no tropezar.
   1. pájaro
   2. hombre
   3. perro
   4. caballo
5. Me gustaría que todos bailaran en _____.
   1. la sala
   2. la mesa
   3. la ventana
   4. la silla
6. Cuando el niño se acostaba, su padre lo _____.
   1. mojaba
   2. mataba
   3. tiraba
   4. bendecía

Página 3

Prueba del quinto grado

PARTE II -- VOCABULARIO (continúe)

7. Ayer yo _____ toda la tarde por el campo.

   1. soñar 3. dormir
   2. anduve 4. leo

8. _____ muy feliz si tuviera salud.

   1. Sería 3. Bajo
   2. Soy 4. Triste

9. Me harías un gran _____ si vinieras a buscarme.

   1. dormir 3. subir
   2. hablar 4. favor

10. Tu _____ venir a vernos.

   1. prometiste 3. preparar
   2. preciosos 4. preguntar

11. La flor esta _____.

   1. saludo 3. laguna
   2. perfumada 4. repaso

12. La laguna tiene _____.

   1. perfumó 3. agua
   2. acercándose 4. leche

13. El que llora le salen _____

   1. maíz 3. corazón
   2. tierra 4. lágrimas

Página 4

Prueba del quinto grado

PARTE II -- VOCABULARIO (continúe)

14. El oro es un gran _____.

1. desprecio
2. tesoro
3. sufrir
4. giras

15. Uno que siembra, es _____.

1. labrador
2. maestro
3. bombero
4. zapatero

16. Uno que pone suelas y tacones es _____.

1. labrador
2. bombero
3. maestro
4. zapatero

17. Los ratones comen _____.

1. mangos
2. queso
3. yerba
4. hormigas

18. El clavel es _____.

1. una flor
2. un alimento
3. un cepillo
4. una cebolla

19. Los becerritos creceran a ser _____.

1. gatos
2. aves
3. vacas
4. cabras

20. Uno que toca la guitara bien, se puede decir que es _____.

1. labrador
2. maestro
3. títere
4. músico

Página 5

Prueba del quinto grado

PARTE III -- COMPRENSIÓN/LEER

Lea cada selección con cuidado. Luego haga los ejercicios. Escója la palabra o frase que mejor complete cada oración. Haga una cruz frente a la palabra o frase que escoja.

UN DÍA MUY NUBLADO NACÍO EN UN JARDÍN UNA EXTRAÑA FLOR. SU TALLO ERA FUERTE, Y SU COROLA MUY GRANDE, COMO UN DISCO. LAS DEMÁS LA MIRABAN CON DESPRECIO. ELLA ERA HUMILDE, PERO SE SENTÍA TRISTE AL VERSE DESPRECIA POR LAS OTRAS FLORES. NINGUNA ERA MÁS INFELIZ EN EL JARDÍN. MÁS NO PODÍA LLORAR.

TODOS LOS ANIMALES SE REÍAN DE LA FLOR. Y LA DESPRECIABAN DICIÉNDOLE: NO TE PARECES A NINGUNA OTRA FLOR. TE FALTA GRACIA Y BRILLO.

AQUELLOS DESPRECIOS HACÍAN SUFRIR A LA HUMILDE FLOR. UN DÍA MIRÓ AL SOL Y LE DIJO: NECESITO QUE HAGAS EL MILAGRO DE PRESTARME TU LUZ. NO QUIERO SUFRIR Y VERME DESPRECIADA POR LOS DEMÁS.

1. La extraña flor tenía

   1. _____ tallo grande y corola muy fuerte.
   2. _____ tallo fuerte y corola muy grande.
   3. _____ tallo como un disco.
   4. _____ corola pequeña en forma de disco.

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Prueba del quinto grado

PARTE III -- COMPRENSIÓN/LEER (continúe)

2. Los animales despreciaban esta flor, diciéndole que
   1. _____ le faltaba brillo y gracia.
   2. _____ tenía el tallo grande.
   3. _____ parecía a otras flores.
   4. _____ lloraba mucho.
3. La flor sufría mucho por
   1. _____ su humildad.
   2. _____ aquellos desprecios.
   3. _____ su tamaño.
   4. _____ su tristeza.
4. Un día miró al Sol y le dijo:
   1. _____ Quiero que me hagas bonita.
   2. _____ Quiero que me prestes tu luz.
   3. _____ Quiero irme de aquí.
   4. _____ Quiero ser un pájaro.
5. Esta flor nació en un día
   1. _____ muy nublado.
   2. _____ muy caliente.
   3. _____ con mucho sol.
   4. _____ que estaba lluviendo.

Página 7

Prueba del quinto grado

PARTE III -- COMPRENSIÓN/LEER (continúe)

HAY PERLAS FAMOSAS POR SU TAMAÑO Y PRECIO. LA NOMBRADA PEREGRINA, QUE POSEÍA ENRIQUE II, REY DE ESPAÑA, PESABA 134 KILATES. TENÍA EL TAMAÑO DE UN HUEVO DE PALOMA Y LA FORMA DE UNA PERA. HABÍA SIDO LLEVADA DE PANAMÁ, Y ESTABA TASADA EN 50,000 DUCADOS, UNA MONEDA ANTIGUA DE ORO CUYO VALOR LLEGÓ A SER 7 PESETAS. HAY OTRAS MUCHAS PERLAS FAMOSAS EN EL MUNDO Y SUS PRECIOS ALCANZAN CIFRAS EXORBITANTES.

LOS CHINOS NO SOLO LAS USAN COMO ADORNO, SINO QUE MUELEN LAS PEQUEÑAS Y LAS EMPLEAN COMO MEDICINA.

ACTUALMENTE HAY CRIADEROS DE PERLAS, ES DECIR, LUGARES EN DONDE LAS OSTRAS SON ARTIFICIALMENTE IRRITADAS PARA QUE PRODUZCAN PERLAS. ESTOS CRIADEROS SE ENCUENTRAN, PRINCIPALMENTE, EN EL JAPÓN Y EN LA CHINA. ALLÍ SE EMPLEAN MUJERES PARA EXTRAER LAS OSTRAS DEL FONDO DEL MAR.

6. La Peregrina era una perla famosa porque

   1. _____ pesaba 134 kilates y valía 50,000 ducados.
   2. _____ pertenecía al rey de España.
   3. _____ fue llevada de Panamá.
   4. _____ era la unica perla famosa en el mundo.

Página 8

Prueba del quinto grado

PARTE III -- COMPRENSIÓN/LEER (continúe)

7. Las perlas más nombradas son famosas

   1. _____ por su tamaño y precio.
   2. _____ porque los chinos las comen.
   3. _____ porque solo se usan como adorno.
   4. _____ algunas personas las emplean como medicinas.

8. Hay criaderos de perlas en

   1. _____ el Japón y en la China.
   2. _____ Panamá.
   3. _____ todas partes.
   4. _____ España.

9. Los chinos usan las perlas como adorno y para

   1. _____ usar como dinero.
   2. _____ ser su comida.
   3. _____ medicina.
   4. _____ jugar.

10. Para estraer las ostras del fondo del mar, se usan

   1. _____ los hombres de allí.
   2. _____ los ninos de allí.
   3. _____ las mujeres de allí.
   4. _____ los jovenes de allí.

Appendix C: Supplementary Data Relative to Grade Five Responses on the Desirability for Further Spanish Language Instruction

Supplementary Data Relative to Grade Five Responses on the Desirability for Further Spanish Language Instruction

A supplementary analysis was performed to provide other related information on grade five responses on the desirability for further Spanish language instruction. Figure 1 shows the numerical relationship of student responses for experimental and control group students in grade five.

Figure 1

Group	Rating Criteria	Elementary	Junior High	Senior High
Experimental	Favorable	8	8	8
	Indifferent	1	2	2
	No	5	4	4
Control	Favorable	13	12	12
	Indifferent	--	--	--
	No	--	1	1

The data in Figure 1 clearly show both experimental and control groups scoring favorably for Spanish language instruction at all grade levels. However, it also is noted that 6 out of 14 experimental group students scored in the "indifferent" or "no" column, with the larger proportion of the responses falling in the negative column. On the other hand, all of the control group students responded favorably to Spanish language instruction in the elementary grades, and 12 out of 13 students indicated a favorable reaction for this type of instruction at the junior high school and senior high school level. Only one control group response was recorded in the negative column.

Several factors may have influenced the shift in pattern of responses toward Spanish language instruction in grade five. The questionnaire data reveal a plausible teacher variable between the two schools. Most of the students (11) in the experimental group receive instruction from an English-speaking (monolingual) teacher, while all of the children in the control group get grade level five subject-matter instruction from Spanish surname (bilingual) teachers. Five of the 11 experimental children scored negatively in terms of this variable.

However, it is noted that the foregoing is only one plausible factor that may influence students on the aforementioned variable. Another possible influential factor is the geographical setting. It already has been pointed out that West Pecos children tend to come in contact with Anglo Americans more frequently than East Pecos children. Finally, a third plausible variable is that a saturation point in Spanish language learning may have been reached by these grade five pupils. However, favorable scoring for continued Spanish language at the high school level tends to reject this as a possible influential factor.

The foregoing are only three plausible factors that may have influenced lower scoring on this variable by grade five experimental students as compared to grade five control group students. Other more relevant factors might be detected by personnel in the school system.

Figure 2 gives additional information on the question of student perceptions on Spanish language instruction at different grade levels. This data also compare the experimental and control group responses; however, this analysis provides accumulative information on all of the experimental and control groups.

Figure 2

Group	Rating Criteria	Elementary	Junior High	Senior High
Experimental	Favorable	46	45	48
	Indifferent	2	3	2
	No	12	10	6
Control	Favorable	31	30	31
	Indifferent	5	6	6
	No	10	9	7

The statistical data in Figure 2 show the majority of the student responses in the favorable category for both experimental and control groups. Proportionately, the overall positive responses as compared to "indifferent" or "negative" responses tend to favor the experimental students over control group students. It also is noteworthy that the number of positive responses are nearly equal for the different school categories (elementary, junior high, and senior high), which indicates a general student desirability for Spanish language instruction at all grade levels.

Appendix D: Spanish Language Texts and Supplementary Materials Used in the Pecos Language Arts Program

BASIC READERS

"Por el mundo del cuento y la aventura." (Ten books plus teacher manuals)

OTHER BOOKS

"Series de libros para la niñez de Bowmar"
"Español que funcióna" Banks Upshaw & Co.
"Series Editorial Almendén" McNally & Loftin
"Horas Encantadas"
"Spanish Program Materials" and other from National Textbooks Co.

INSTRUCTIONAL MATERIAL

UNITS:
(a) The family
(b) The classroom
(c) Christmas
(d) Farm animals
(e) Parts of the body
(f) Pets
(g) Community helpers

RECORDS:

Escuchar y Cantar by Holt, Rinehart & Winston Inc.
Sing and Speak Spanish by Houghton Mifflin Co.
Spanish Songs for Children by Spoken Arts Inc.
Dictados en Español Tipos y Paisajes by Spoken Arts Inc.
Children's Songs from Spain by Folkway Records
Pan American Folk Dances by Spanish Music Center, N. Y.
Spanish American Children's Songs by Children's Music Center, Inc., California
Canciones para la clase de Español by Bowman Records
Antología oral. Poesía hispano Americana del siglo XX by Folkway Records

OTHER BOOKS

Follet Beginning to--Read Spanish Books! (Collection of five books with respective records)
Colección Campanilla by Books of the World, Missouri
Colección: "Cuéntame un cuento"
Editorial Novarro. México, S. A.
Goldilocks y otros cuentos: N. T. C.
Bedtime Stories in Spanish: N. T. C.

DICTIONARIES

Pequeño Larousse Ilustrado
Diccionario Español de Sinónimos y Antónimos
Velásquez: Spanish and English

READERS TO BE USED DURING
THE 1969-70 SCHOOL YEAR

Basic Reader: Por el mundo del cuento y la aventura

Grade		Level
1	Mis juegos y cuentos	1
	¡A jugar y a gozar!	1
2	¡A la escuela!	1
	Amigos de aquí y de allá	1
3	Pueblo y campo	2[1]
4	Sorpresas y maravillas	2[2]
5	Por esos caminos	3
6	(1968-69)	
	Por esos caminos	3
	Nuestro mundo maravilloso (half of last book only)	4

First graders are reading: ¡A jugar y a gozar!

Second graders are reading: ¡A la escuela!

Third graders are reading: Pueblo y campo

Fourth graders are reading: Sorpresas y maravillas

Fifth graders are reading: Por esos caminos

They have an average of 20-25 minutes but they meet only two or three times a week.

Appendix E: Supplementary Observations Reported by Interviewers

A Brief Observational Review of Pecos Residents Interviewed on the Pecos Language Arts Program

by R. T. Kelo Salazar

Introduction

The Southwestern Cooperative Educational Laboratory, Inc. of Albuquerque employed this consultant, a Program Analyst with Model Cities--Albuquerque, and Paul Tafoya, a high school teacher in the Albuquerque Public Schools System, to interview parents whose children had been exposed to the Bilingual Program at the Pecos schools. It is hoped that the following subjective data will enable interested persons to get a much clearer picture of the parents, children, attitudes, and locale, and somehow relate the picture with the objective data obtained from them through the questionnaire.

Setting

Pecos, New Mexico is 85 miles north of Albuquerque. Most of the town's inhabitants are predominantly Spanish American. Besides the small village of Pecos, East Pecos is found across the Pecos River. It is in this part of town where chronic socio-economic conditions are felt the most. Outside latrines, cramped living quarters, large families, and dilapidated housing, are pretty much the fashion of this community. Other surrounding areas where people are spread out within a 20 mile radius from Pecos, where parents were also interviewed are Cowles, La Joya, La Cueva, and Rowe.

The People

Enough cannot be said about the attitude and hospitality of the people interviewed. They are friendly, often offering coffee, homemade pastries, and other edible items. On several occasions some parents insisted on our accepting a bagful of piñon that was freshly picked and roasted. It can be said that not one parent or guardian rebuffed our purpose. Because the houses do not bear numbers, it often proved difficult to locate sought family names. Yet, the people were most willing to furnish information regarding family locations.

Attitude Toward Bilingual Program

The questions were often asked in Spanish, requiring, at times, some elaboration on the part of the interviewer. They received all questions well and expressed interest by making additional comments about the Bilingual Program. There were strong indications that pointed to approval of the manner in which the program was functioning. Many parents stated that more programs of this nature were needed--not only in the Pecos Schools, but in other schools as well. In many instances when the interview was in progress, children who were enrolled in the program were present and made favorable remarks about it.

Summary

Both Paul Tafoya and this consultant enjoyed acting as researchers for this particular project. If additional information is desired relative to the job assigned to us, this consutant would be more than happy to assist in any way possible.

A Brief Observational Review of Pecos Residents Interviewed on the Pecos Language Arts Program

by Paul R. Tafoya

Response was overwhelmingly in favor of the continuation of a bilingual and bicultural program in the Pecos School System.

The predominantly Spanish population of Pecos can be described as a very sanguine, receptive, and cooperative people. For the most part, these are people who struggle to meet the daily needs of life. Material possessions are few. Practically all homes continue to use wood stoves and heaters. The homes are small in view of the extended family, and the overall dwelling is not pretentious.

Families from both the experimental groups and the control groups were contacted in person. The one difficult obstacle was identifying the exact location and premise, since there were no street signs or numbers or even mail boxes. Each contact, which took place in the presence of one or both parents, was a warm and pleasant experience for this consultant. The elderly parent or guardian was more at home to discuss the questionnaire in Spanish. Younger couples preferred to acknowledge their response in English. All were deeply interested in the Spanish Language Program. They, in their very pragmatic and traditional orientation, desire to propagate the native tongue, as well as the history and culture of this "idioma." Means to this end, as ascertained through and beyond the Parents' Attitudinal Questionnaire, can only be met through the SWCEL project. Many parents did comment that in the formal school setting this program was succeeding. However, in the informal

setting--recess, playground, halls, etc.--the Spanish language was not to be used. Hence, there is some degree of ambivalence. Yet, the final question in this questionnaire is vital to the direction and salvation of the Spanish Language Program.

A Report on the Questionnaire
Interviewing of Pecos Administrators, Teachers,
and Auxiliary Personnel

by Lorraine Gutierrez

The administrators, teachers, and auxiliary personnel in both the West Pecos and East Pecos elementary schools were interviewed. Among the most important attitudes and observations revealed by the interviewees were:

1. General approval of the Pecos Spanish Language Program was evident.
2. Insufficient time in the schedule for the Spanish Language Program was indicated as a present problem.
3. Some concern was revealed over the possibility of negative (psychological) learning effects in correcting children based on colloquial terms as compared to "the right way."
4. Where program expansion is envisioned, some suggestions were expressed for the utilization of New Mexico bilingual teachers.
5. It was revealed that teachers discouraging children from using Spanish on the school grounds has dropped notably since the Spanish Language Program was installed.
6. There is some evidence among the East Pecos teachers (control school) relative to the notion that usage of Spanish might interfere with the child's ability to speak English without an accent. It also was pointed out among the teachers that frequent usage of English in school was encouraged, based on the theory that children need all the practice that is practically possible.